



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/826,402

04/19/2004

Hung-Hsiang Yeh

TSAI 138

9927

7590 07/26/2007  
RABIN & BERDO, P.C.  
1101 14 Street, N.W., Suite 500  
Washington, DC 20005

EXAMINER

SAUNDERS JR, JOSEPH

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

07/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/826,402

Applicant(s)

YEH, HUNG-HSIANG

Examiner

Joseph Saunders

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This is the initial office action based on the application filed April 19, 2004.

Claims 1 – 20 are currently pending and considered below.

### ***Specification***

2. The specification is objected to due to idiomatic English. For example the Abstract other sections of the specification states that the "adapting apparatus possesses the broader functionality of broadcasting the compressed digital music through the USB port to a computer or through the cigarette-lighter charger port to a vehicle." The Examiner does not fully understand what is meant by "broadcasting the compressed digital music" "through the cigarette-lighter charger port to a vehicle". While the Examiner understands that a compressed digital music signal can be transmitted through a USB port to a computer the Examiner does not understand how a compressed digital music signal can be transmitted through a cigarette-lighter charger port to a vehicle. In this circumstance it seems that the Applicant may be attempting to explain how the device receives power and not how the device broadcasts or transmits information, however the idiomatic English makes the exact meaning of the Applicant unclear. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 6 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al. (US 2005/0015260 A1), hereinafter Hung, in view of Hsu (US 6,842,356 B2), hereinafter Hsu.

**Claim 1:** Hung discloses a compressed digital music adapting apparatus for vehicles (MP3 application device 200, Figure 2), the apparatus comprising: a main body of an adaptor having a USB port (USB host circuit 112) and a cigarette-lighter charger port (DC power supply connection for receiving the DC power (12V) from a cigar lighter); and an FM modulator/transmitter for modulating and transmitting (frequency modulation transmitter 270) compressed digital music (MP3). Hung discloses a voltage transformer 260 for converting the voltage to a suitable level for supplying power to various components inside the device 200a but does not disclose wherein the voltage transformer also provides the function of a power regulator inside the main body of the adaptor for regulating a voltage and while Hung teaches that the FM modulator/transmitter is inside the main body of the adaptor (Figure 2), Hung does not explicitly teach that the frequency modulation transmitter is electrically coupled to the power regulator but does teach that the voltage transformer supplies power to various

Art Unit: 2615

circuits inside the device. Hsu discloses an on-vehicle charger that not only transforms or converts a 12V DC source from a cigarette-lighting receptacle but also regulates the 5V for a USB device (Figure 3). Since it is well known in the art at the time of the invention that USB operates at 5VDC/500mA it would have been obvious to one of ordinary skill in the art at the time of the invention to design the USB host circuit disclosed by Hung to operate at 5V as disclosed by Hsu. If the USB host circuit were not designed to operate at a stabilized 5V, devices connected to the host circuit would not be able to function properly. Further, since the voltage transformer and regulator as disclosed by Hung and Hsu supplies power to various components inside the device as taught by Hung it would have been obvious to one of ordinary skill in the art at the time of the invention to use the transformed and stabilized voltage to power the frequency modulation transmitter 270, if the frequency modulation transmitter 270 was not electrically coupled to the transformed and stabilized voltage the frequency modulation transmitter 270 would not receive any power and therefore would not operate.

**Claim 6:** Hung and Hsu disclose the apparatus of claim 1, and both Hung and Hsu further disclose wherein the voltage is about 12 volts for the cigarette-lighter charger port (DC power (12V) from a cigar lighter, Hung Paragraph 33).

**Claim 7:** Hung and Hsu disclose the apparatus of claim 1, and Hsu further discloses wherein the voltage is about 5 volts or about 3 volts for the USB port (5VDC/500mA, Figure 2).

**Claim 8:** Hung and Hsu disclose the apparatus of claim 1, and Hung further discloses wherein the compressed digital music comprises an MP3 format (MP3, Figure 2), a CELP format, a WMA format, or an ACC format.

5. Claims 2 – 4 and 14 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung and Hsu in view of Tak (KR 2002-0054686), hereinafter Tak, and Fouladpour (US 6,608,264 B1), hereinafter Fouladpour.

**Claim 2:** Hung and Hsu disclose the apparatus of claim 1, and Hung further discloses the apparatus comprising: a digital music player (MP3 decoder 126, Figure 2). In an alternate embodiment Hung also discloses a similar device where the FM transmitter 270 is omitted in place of a loudspeaker 150 for broadcasting. Hung does not disclose incorporating the loudspeaker and the FM transmitter in the same device however Tak discloses a similar device that does incorporate both the option of broadcasting from an FM transmitting module or broadcasting to a speaker/earphone disposed in the terminal through the external output port 220 (Figure 2). Since Hung does not disclose a FM transmitter and a loudspeaker in the same embodiment like Tak, Hung and Hsu therefore do not disclose an audio switch for selecting between and transmitting the compressed digital music to a first medium and a second medium. But given the teachings <sup>of</sup> ~~off~~ Tak and the two embodiments taught by Hung it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate both a FM

Art Unit: 2615

transmitter and an loudspeaker with a switch selecting between the two different mediums in the system of Hung and Hsu thereby enabling the user control over whether the outputted audio signal is sent to the loudspeaker or broadcast by the FM transmitter. Hung and Hsu also do not disclose a power switch for switching between the USB port and the cigarette-lighter charger port. Fouladpour discloses a situation where an audio file player 302 can connect to a computer through USB or an alternate power source through a car-lighter socket (Figure 3 and Column 4 Lines 2 – 3, 19 – 31, and Column 4 Line 54 – Column 5 Line 5). Fouladpour goes on to describe how some audio players operate in modes, for instance an audio player runs off its own batteries and is in music playback mode when it does not receive power from a data cable (USB), and on the other hand the audio player is in a data storage and transfer mode when it receives power from a data cable (USB). Therefore providing a switch enables the device to switch between modes without having to unplug cables and also enables the selection of a primary power source or an alternate power source without having to unplug cables. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include a switch in the system of Hung, Hsu, and Tak as disclosed by Fouladpour since the power switch would enable the user of the system to avoid the need to plug and unplug cables avoiding wear and tear on the connectors of the power sources.

**Claim 3:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 2, and Hung further discloses wherein the first medium comprises at least a speaker or a headphone

Art Unit: 2615

(loudspeaker 150, Figure 1).

**Claim 4:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 2, and Hung further discloses wherein the second medium comprises at least a vehicular speaker (Car Audio-Stereo System 280, Figure 2).

**Claim 14:** Hung discloses a adapting apparatus for compressed digital music, which can be used in a vehicle (MP3 application device 200, Figure 2), the apparatus comprising: a main body of an adaptor having a USB port (USB host circuit 112) and a cigarette-lighter charger port (DC power supply connection for receiving the DC power (12V) from a cigar lighter); a digital music player (MP3 decoder 126) inside the main body of the adaptor for transmitting compressed digital music (MP3); an FM modulator/transmitter(frequency modulation transmitter 270) inside the main body of the adaptor for modulating and transmitting the compressed digital music (MP3). Hung discloses a voltage transformer 260 for converting the voltage to a suitable level for supplying power to various components inside the device 200a but does not disclose wherein the voltage transformer also provides the function pf a power regulator inside the main body of the adaptor for regulating a voltage and while Hung teaches that the FM modulator/transmitter is inside the main body of the adaptor (Figure 2) Hung does *not explicitly teach* that the frequency modulation transmitter is electrically coupled to the power regulator but does teach that the voltage transformer supplies power to various circuits inside the device. Hsu discloses an on-vehicle charger that not only



Art Unit: 2615

transforms or converts a 12V DC source from a cigarette-lighting receptacle but also regulates the 5V for a USB device (Figure 3). Since it is well known in the art at the time of the invention that USB operates at 5VDC/500mA it would have been obvious to one of ordinary skill in the art at the time of the invention to design the USB host circuit disclosed by Hung to operate at 5V as disclosed by Hsu. If the USB host circuit were not designed to operate at a stabilized 5V, devices connected to the host circuit would not be able to function properly. Further, since the voltage transformer and regulator as disclosed by Hung and Hsu supplies power to various components inside the device as taught by Hung it would have been obvious to one of ordinary skill in the art at the time of the invention to use the transformed and stabilized voltage to power the frequency modulation transmitter 270, if the frequency modulation transmitter 270 was not electrically coupled to the transformed and stabilized voltage the frequency modulation transmitter 270 would not receive any power and therefore would not operate. In an alternate embodiment Hung also discloses a similar device where the FM transmitter 270 is omitted in place of a loudspeaker 150 for broadcasting. Hung does not disclose incorporating the loudspeaker and the FM transmitter in the same device however Tak discloses a similar device that does incorporate both the option of broadcasting from an FM transmitting module or broadcasting to a speaker/earphone disposed in the terminal through the external output port 220 (Figure 2). Since Hung does not disclose a FM transmitter and a loudspeaker in the same embodiment like Tak, Hung and Hsu therefore do not disclose an audio switch for selecting between and transmitting the compressed digital music to a first medium and a second medium. But given the

Art Unit: 2615

teachings of Tak and the two embodiments taught by Hung it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate both a FM transmitter and a loudspeaker with a switch selecting between the two different mediums in the system of Hung and Hsu thereby enabling the user control over whether the outputted audio signal is sent to the loudspeaker or broadcast by the FM transmitter. Hung and Hsu also do not disclose a power switch for switching between the USB port and the cigarette-lighter charger port. Fouladpour discloses a situation where an audio file player 302 can connect to a computer through USB or an alternate power source through a car-lighter socket (Figure 3 and Column 4 Lines 2 – 3, 19 – 31, and Column 4 Line 54 – Column 5 Line 5). Fouladpour goes on to describe how some audio players operate in modes, for instance an audio player runs off its own batteries and is in music playback mode when it does not receive power from a data cable (USB), and on the other hand the audio player is in a data storage and transfer mode when it receives power from a data cable (USB). Therefore providing a switch enables the device to switch between modes without having to unplug cables and also enables the selection of a primary power source or an alternate power source without having to unplug cables. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include a switch in the system of Hung, Hsu, and Tak as disclosed by Fouladpour since the power switch would enable the user of the system to avoid the need to plug and unplug cables avoiding wear and tear on the connectors of the power sources.

Art Unit: 2615

**Claim 15:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and Hung further discloses wherein the vehicle further comprises an FM receiver (FM receiver 282) for receiving the compressed digital music (Car Audio-Stereo System 280, Figure 2).

**Claim 16:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and Hung further discloses wherein the first medium comprises at least a speaker or a headphone (loudspeaker 150, Figure 1).

**Claim 17:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and Hung further discloses wherein the second medium comprises at least a vehicular speaker (Car Audio-Stereo System 280, Figure 2).

**Claim 18:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and both Hung and Hsu further disclose wherein the voltage is about 12 volts for the cigarette-lighter-charger port (DC power (12V) from a cigar lighter, Hung Paragraph 33).

**Claim 19:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and Hsu further discloses wherein the voltage is about 5 volts or about 3 volts for the USB port (5VDC/500mA, Figure 2).

**Claim 20:** Hung, Hsu, Tak, and Fouladpour disclose the apparatus of claim 14, and

Hung, Tak, and Fouladpour further discloses wherein the compressed digital music comprises an MP3 format (MP3, Hung Figure 2), a CELP format, a WMA format, or an ACC format.

6. Claims 5 and 9 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung and Hsu in view of Gang (KR 2003-0068119), hereinafter Kang.

**Claim 5:** Hung and Hsu disclose the apparatus of claim 1, Hung and Hsu *do not disclose* wherein the main body of the adaptor further comprises an audio-in jack, wherein the audio-in jack is used to connect to an audio-out plug of a digital music player. Kang discloses a similar device with a USB port for connection with a USB device and also an analog connection port 500 for connection with an analog connection terminal 510. The analog connection port 500 allows for other audio devices, i.e. cassette player, CD player, MD player, MP3 player, to connect to the device so that the analog audio signal output from the other audio devices can be selected to be modulated by an RF transmitter (Paragraph 46 and 47). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include an audio-in jack as disclosed by Kang in the system of Hung and Hsu since this would allow for other devices to interface with the system of Hung and Hsu for FM transmission thereby making the system of Hung and Hsu more versatile.

**Claim 9:** Hung discloses an adapting apparatus, which docks a digital music player to a

vehicle (MP3 application device 200, Figure 2), the apparatus comprising: a main body of an adaptor having a USB port (USB host circuit 112), a cigarette-lighter charger port (DC power supply connection for receiving the DC power (12V) from a cigar lighter), and an FM modulator/transmitter for modulating and transmitting (frequency modulation transmitter 270) compressed digital music (MP3) from the digital music player to the vehicle (Car audio-Stereo System 280). Hung discloses a voltage transformer 260 for converting the voltage to a suitable level for supplying power to various components inside the device 200a but does not disclose wherein the voltage transformer also provides the function of a power regulator inside the main body of the adaptor for regulating a voltage and while Hung teaches that the FM modulator/transmitter is inside the main body of the adaptor (Figure 2) Hung does not explicitly teach that the frequency modulation transmitter is electrically coupled to the power regulator but does teach that the voltage transformer supplies power to various circuits inside the device. Hsu discloses an on-vehicle charger that not only transforms or converts a 12V DC source from a cigarette-lighting receptacle but also regulates the 5V for a USB device (Figure 3). Since it is well known in the art at the time of the invention that USB operates at 5VDC/500mA it would have been obvious to one of ordinary skill in the art at the time of the invention to design the USB host circuit disclosed by Hung to operate at 5V as disclosed by Hsu. If the USB host circuit were not designed to operate at a stabilized 5V, devices connected to the host circuit would not be able to function properly. Further, since the voltage transformer and regulator as disclosed by Hung and Hsu supplies power to various components inside the device as taught by Hung it would

Art Unit: 2615

have been obvious to one of ordinary skill in the art at the time of the invention to use the transformed and stabilized voltage to power the frequency modulation transmitter 270, if the frequency modulation transmitter 270 was not electrically coupled to the transformed and stabilized voltage the frequency modulation transmitter 270 would not receive any power and therefore would not operate. Hung and Hsu *do not disclose* the system having an audio-in jack. Kang discloses a similar device with a USB port for connection with a USB device and also an analog connection port 500 for connection with an analog connection terminal 510. The analog connection port 500 allows for other audio devices, i.e. cassette player, CD player, MD player, MP3 player, to connect to the device so that the analog audio signal output from the other audio devices can be selected to be modulated by an RF transmitter (Paragraph 46 and 47). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include an audio-in jack as disclosed by Kang in the system of Hung and Hsu since this would allow for other devices to interface with the system of Hung and Hsu for FM transmission thereby making the system of Hung and Hsu more versatile.

**Claim 10:** Hung, Hsu, and Kang disclose the apparatus of claim 9, and Hung and Kang further discloses wherein the vehicle further comprises an FM receiver (FM receiver 282) for receiving the compressed digital music, and at least an amplifier for broadcasting the compressed digital music (Car Audio-Stereo System 280, Hung Figure 2).

**Claim 11:** Hung, Hsu, and Kang disclose the apparatus of claim 9, and Hung, Hsu, and Kang all further disclose wherein the voltage is about 12 volts for the cigarette-lighter charger port (DC power (12V) from a cigar lighter, Hung Paragraph 33).

**Claim 12:** Hung, Hsu, and Kang disclose the apparatus of claim 9, and Hsu further discloses wherein the voltage is about 5 volts or about 3 volts for the USB port (5VDC/500mA, Figure 2).

**Claim 13:** Hung, Hsu, and Kang disclose the apparatus of claim 9, and both Hung and Kang further disclose wherein the compressed digital music comprises an MP3 format (MP3, Hung Figure 2), a CELP format, a WMA format, or an ACC format.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Saunders whose telephone number is (571) 270-1063. The examiner can normally be reached on Monday - Thursday, 9:00 a.m. - 4:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JS  
July 20, 2007



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**